DOCUMENT RESUME

ED 461 774 CG 031 482

AUTHOR Ibrahim, Abdel-Sattar; Ibrahim, Radwa M.
TITLE Anxiety, Depression, Hostility and General Psychopathology: An Arabian Study.
PUB DATE 2001-00-00
NOTE 19p.
PUB TYPE Reports - Research (143)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Anxiety; Attitude Measures; *Cultural Differences; *Depression (Psychology); Etiology; Foreign Countries; *Hostility; Influences; *Psychopathology; Research; Role; *Sex Differences; Socioeconomic Background; Surveys
IDENTIFIERS *Psychosocial Factors; Saudi Arabia

ABSTRACT

In Arabian cultures, the psychosocial characteristics of psychopathological trends, including depression, anxiety, and hostility remain largely unknown. Scales measuring depression, anxiety, and hostility were administered to a voluntary sample of 989 Saudi Arabian men and 1,024 Saudi women coming from different social, economical, and educational backgrounds. The principal aims of this study were to: (1) compare Saudi men's psychopathological mean scores with mean scores in their female peers; (2) examine the interactions among psychopathological scores in both male and female groups; and (3) compare psychopathological scores among several subgroups in male and female groups. By using the Hotelling Principal Component Factor Analysis, only one unrotatable factor, identified as general Psychopathology, was extracted in each group. Although women scored generally higher than men, the differences were not significant. The pattern of group differences, within each group separately, was of more value than gender differences. In both groups, increased scores on depression, anxiety, hostility, and general psychopathology were reported for adolescents. Working women and homemakers obtained lower scores. Hostility was less pathological among females. Results are also discussed in relation to the theory of interaction between social roles and exposure to stressful life events. (Contains 4 tables and 27 references.) (Author/JDM)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 461 774

Anxiety, Depression, Hostility and General Psychopathology:

An Arabian Study

Abdel-Sattar Ibrahim, Ph.D., APMPP* **Radwa M. Ibrahim, Ph.D., ABDA**

*** Address reprints requests to:** Abdel-Sattar Ibrahim, Ph.D.
The Medical Center, P. O. Box 5024
King Fahd University of Petroleum
Dhahran 31261, Saudi Arabia

BEST COPY AVAILABLE

CG031482

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

A. S. IBRAHIM

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Anxiety, Depression, Hostility and General Psychopathology:

An Arabian Study

Abstract

In Arabian cultures, the psycho-social characteristics of psychopathological trends including depression, anxiety, and hostility remain largely unknown. Scales measuring depression, anxiety, and hostility were administered to a voluntary sample of 989 Saudi Arabian men and 1024 Saudi women coming from different social, economical, and educational backgrounds. The principal aims of this study were to: (1) Compare Saudi men's psychopathological mean scores with mean scores in their female peers, (2) Examine the interrelations among psychopathological scores in both male and female groups, and finally to (3) Compare psychopathological scores among several subgroups in male and females groups.

By using the Hotelling Principal Component Factor Analysis, only one unrotatable Factor, identified as general Psychopathology, was extracted in each group.

Although women scored generally higher on all test scores than men, the differences were not significant. The pattern of group differences within each group separately, was of more value than gender differences per se. In both groups, increased scores on depression, anxiety, hostility, and general psychopathology were reported for adolescents and younger people. Working women and house makers obtained lower mean scores. It was, also, indicated that hostility is less pathological among females. In the men group, on the other hand, police officers, secondary school students, and theology students had statistically significant higher mean scores than all other groups.

The current research results were discussed based on the theory of interaction between social roles and extent of exposure to stressful life events.

Introduction

Depression, hostility, and anxiety are among the most wide spread emotional problems in most societies, and the most common psychiatric disorders for which people seek help for themselves or others in psychiatric settings, office practice, out-patients clinics and/or counseling centers (Hamilton, 1989; Kupfer & Frank, 1981). The prevalence of such problems and their relationship with psychopathology has stimulated much research in Western societies. However, we are still far from knowing the incidence and demographic distribution of many premorbid

psychopathological trends in Arabian cultures. This paper aimed at estimating distribution of these premorbid characteristics in a major Arabian country, mainly Saudi Arabia.

Numerous studies have, also, shown that psychopathological traits are more common in females than males (e.g., Hamilton, 1989; Schwab, Brown, & Holzer, 1968; Schwab, Holzer, & Warhett, 1981; Weissman & Klerman, 1977). Hamilton (1989) has reported that depression, for example, is approximately twice as frequent in females than in males. Other studies on sex-related differences in psychopathology have shown that definite sex- related profile of psychopathology emerges (Powell, Denton, & Mattson, 1995; Schwab, Brown, & Holzer, 1968).

Obviously, research in this area is much needed to explore the interaction between sex-related and psychopathological patterns in Arabian samples. This study represented one of the attempts towards this goal.

More specifically, this research investigated depression, anxiety, hostility, and psychiatric symptom rates among groups of Saudi Arabian women, and compared women scores in these measures with obtainable rates in men. Also, we examined the relationship among all psychopathological scores in both groups. Additionally, and in order to determine the prevalence of psychopathology in a large sample from Saudi Arabia, the present study provided psychopathology scores for Saudi women and Saudi men across several social and demographic subgroups.

Method

Subjects

The data used in this investigation were collected from 989 Saudi Arabian men and 1024 Saudi women. The men's sample ranged in age from 15.7 years to 59.1 years. In the male sample 517 were university students, 105 were employed in governmental positions, 40 secondary school teachers, 39 accountants and bank employees, and 41 policemen. The rest of the male sample

came from different professional and career backgrounds. The majority of the male subjects were ethnic Saudis. Muslims accounted for over 95% of the sample.

The women group ranged in age from 15.3 years to 56.5 years. Two hundred eighty nine women were secondary school students, 203 university students drawn from different colleges and specialization including medicine, education, science and history; 133 secondary and preparatory teachers; and the rest 399 of the female sample included technicians, house- makers, and other governmental employees.

Subjects were asked to volunteer for a scientific study. They were informed in writing on the cover sheet of the research questionnaires that the study is of a research nature, and may offer no direct benefit to them. Naturally, the subjects were given the choice of withdrawing at anytime during the course of the study without any negative consequences. To ensure confidentiality, subjects were not obliged to write their names or give any other identifiable information.

Measures

The Biography Questionnaire (BQ)

The BQ consists of items concerning major demographic and biographic aspects, including age, marital status, educational level, etc. Test retest reliability for the BQ was 0.89 (n=50).

The Symptom Inventory (SI)

This inventory is designed to tap differences in general psychopathology. The SI consists of 27 items selected by Abdel-Sattar Ibrahim (Ibrahim & Alnafie, 1991) from major psychological tests of psychopathology, which were validated in Arabic Cultures, including the Minnesota Multiphasic Personality Inventory (MMPI) and the Eysenck Personality Questionnaire (EPQ) (Eysenck & Eysenck, 1975; Ibrahim, 1982). Items on this inventory represented a number of

psychopathological behaviors that describe major psychiatric disorders such as sleep disturbances, social withdrawal, delusional thinking, hallucinations, and drug use.

The Depression Symptomatology Scale (DSS)

This scale consists of 18 items that have been used widely in research on depressive Symptomatology (Schwab, Holzer, & Warhett, 1981). They were based on the conceptualization of depression as a syndrome, consisting of five major dimensions. In scoring the DSS, the same technique used by Schwab and his colleagues (Schwab, Holzer, & Warhett, 1981) was implemented. Subjects rated each item on both the DSS and the SI on a scale ranging from not troubled (1) to highly troubled (3).

Ibrahim (1991) and Ibrahim and Alnafie (1991) have translated these instruments into Arabic and then made another attempt to produce a translation close to local Saudi dialects. The reliability and the validity of the above study scales were reported elsewhere (Ibrahim, 1982; 1991; Ibrahim & Alnafie, 1991; Ibrahim, 1991). Each scale was estimated for reliability by using Cronbach's alpha as a measure of internal consistency. Alpha coefficients for the SI and the DSS were 0.88 and 0.90, respectively.

The Multiple Affect Adjective Check List (MAACL)

The Multiple Affect Adjective Checklist consists of negative adjectives such as unhappy and listless, as well a positive adjectives such as strong, lucky, and free. The scale requires the subjects to respond by checking every adjective that describes "how they feel today." In scoring the MAACL, we used the scoring keys for depression (D), Anxiety (A), and hostility (H) scales (Zuckerman & Lubin, 1965).

The Cronbach's Alpha was computed as a measure of internal consistency. The mean correlation for the three subtests was found to be 0.76, well above the limit accepted for the scale reliability. In a more recent validation study (Abdel-Mawgoud & Moftah, 1995), the same group of scales were found to discriminate significantly between a total of 110 psychiatric inpatients and a comparable non patient control group.

Also, in another item analyses study (Abdel-Mawgoud and Moftah, 1995), the items have shown an overall significant decrease following an intensive eclectic psychotherapy program presented to a total of 45 hospitalized drug addicts at Al-Amal Hospital, Saudi Arabia, additionally confirming the validity of these scales as measures of psychopathology.

The *Biography Questionnaire*, the *Depressive Symptomatology Scale*, the *Symptoms Inventory*, and the *Multiple Affect Adjective CheckList* were administered to all subjects in a group-testing situation.

Results

Means, Standard Deviations, and Intercorrelations

Table 1 shows the means and standard deviations for the female/male samples for each instrument. Though not highly significant, an overall female increase on all test scores was indicated.

Insert Table 1 About Here

Interrelations between the questionnaires were all significant. They are displayed for both males and females in Table 2. In the male group, the highest correlation was between the *depression symptomatology scale* and the *symptom inventory* scale followed by high correlation between

Insert Table 2 about Here

the *depression*, *hostility*, and *anxiety* scores on the *MAACL*. Also, in both groups the correlation between the *hostility* and the *depression symptomatology* scores and the *symptom inventory* scores were highly significant. However, males' correlations between *hostility* and the rest of these variables are much higher than that for the females. This may indicate that self-reported female hostility may be less pathological as compared to men.

By using the Hotelling Principal Component Factor Analysis, only one unrotatable Factor, identified as *general Psychopathology*, was extracted in each group. This factor accounted for

67.3%, and 63.4% for men and women, respectively. In both groups, the *depression symptomatology scale* and the symptom inventory scores had the highest loading on this factor. All other variables had from moderate to high loading except the *hostility* score in the female group, which had nonsignificant loading of 0.23. This adds more confirmation that self-reported hostility in females may be less pathological as compared to men.

Differences within the Male Subgroups

Since it has become almost customary to interpret sex-related differences in behavior as arising mainly from difference in roles, in opportunities, and social expectations, the assumption was made that it might be rewarding to analyze data according to differences in subgroups within each sex sample. Thus, 513 males were divided into seven subgroups based on over %50 of the major socio-economical, and educational backgrounds representative of the male sample. The seven groups included: government employees (n=105), secondary school students (n=230), secondary school teachers (n=40), theology students (from Al-Imam Ben Saud University for Islamic Religion Studies) (n=19), physical education (athletic) students (n=39), police officers (n=41), and bank employees and accountants (n=39).

Table 3 shows the results of the one way ANOVA for the male subgroups. As can be seen

Insert Table 3 About Here

from the table 3, police officers scored significantly higher than all other subgroups on almost all test variables (an overall total score of 112.67). This indicates that this subgroup, more often than other groups, endorse a great number of pathologic symptoms including *hostility*, *anxiety*, *general symptomatology*, and *depression*. Secondary school students scored the second highest subgroup, with an overall score of 96.08. However, secondary school students had significantly scored the highest on the *MAACL' depression scale* than all other groups. The lowest pathology scores were

in favor of secondary school teachers (total of 81.78), followed by bank employees and accountants (an overall total score of 82.56).

Significant group differences were also found on the *symptom inventory* questionnaire, showing again police men and secondary school students with significantly higher psychopathological scores relative to other groups.

Differences within Women Subgroups

Six hundreds and seventy six female Ss, accounting for over % 66 of the total, sample, were also, divided into seven female subgroups based on major representative social , economical and educational backgrounds of the sample in Saudi society. The seven female subgroups selected were: secondary school students (n=289), secondary school teachers (n=112), liberal arts' students (n=112), college students (n=57), house makers (n=41), working women (n=44), and preparatory school teachers (n=21).

A multivariate analysis of variance (MANOVA) indicated significant overall differences among female subgroups. ANOVAs were then computed to compare differences among female subgroups on the five test scores. The results of the ANOVAs are shown in Table 4.

Insert Table 4 About Here

Obviously, the differences among the subgroups were highly significant, with secondary school students and liberal art students scoring the highest on the *depressive Symptomatology* scores; while the working women group scored the lowest.

Significant group differences were also found on the *symptom inventory*, with secondary school students, liberal art students, and preparatory school teachers demonstrating significantly higher scores relative to the other groups, while secondary school teachers along with the working women and house makers showed significantly lower general psychopathology scores.

In the case of the *Multiple Affect Adjective Checklists*, group differences were also demonstrated on the *anxiety*, *depression*, and *hostility* sub-scales. Clearly, secondary school students, preparatory school teachers, and the liberal art students were generally higher than other groups. The working women and house makers, on the other hand, showed significantly lower self-reported *anxiety, depression*, and *hostility* scores.

Discussion

The significant and high intercorrelations among the questionnaires add further proof about the validity of these scales in tapping comparable patterns of psychopathology in both gender samples.

It was anticipated, based on previous Western studies (e.g., Fleming, Offord, & Boyle, 1989; Powell, Denton, & Mattison, 1995), that psychopathology would be greater in the female subgroups than male groups in Arab cultures. This expectation was confirmed only partially, in that women scored generally higher on all test scores than men, but not to the level of significance.

As displayed in Table 4, subgroup differences within females was more significant than differences between males and females per se. It may be suggested, therefore, that the hypothesis of sex related differences in psychopathology have limited utility, at least in Saudi Arabia. Perhaps, the frequency of psychopathology in certain societies may mainly depend on other social and educational influences inside any particular society rather than on gender. Relevant here is a

study of symptoms of depression in the United States and Japan carried out by Baron and Matsuyama (1988). In that study, the authors concluded that sex differences in psychopathology are not to be expected in all societies. Hence, it may be argued that certain demographic, educational, and economical factors are more responsible for psychopathology in so far as they contribute to limiting certain daily satisfactions and in restricting the capacity for successful coping with daily psychological distresses (Rosenfield, 1980). Consistent with this view is the pattern of the results in the female groups. Apparently, higher amounts of self reported *depression, anxiety, and hostility* were expressed by secondary school students, preparatory (junior high) school teachers, and college students. In the male group the same pattern emerged showing increased scores on all tests for secondary school students, indicating again that these groups of young people are more vulnerable to psychopathology.

Although further research is needed, one line of thinking to account for the increased scores on psychopathology variables among young groups in both sexes may be attributed to age. Most of these group individuals were adolescents and young adults. It maybe argued that adolescence is a period of doubtless extensive physical, social, and emotional changes. Previous research (e.g., Baron & Matsuya, 1988; Forsell, Jerom, & Strauss, 1995; Milstein, 1989; Hamburg & Takanishi, 1989) showed that adolescence is a time of particular vulnerability. In fact several longitudinal investigations of developmental differences in anxiety and depression were carried out in Saudi Arabia (Ibrahim, 1991) and other Arab cultures such as Egypt and Kuwait (e.g., Khalik, 1994). In such studies, it was reported that adolescents scored generally higher on anxiety and depression tests than all other groups; a finding that may be, in part, of cultural foundation.

Culturally speaking, older people in Arabian cultures are highly respected and are viewed as having more status and influence in social situations than younger individuals and children (Ibrahim & Ibrahim, 1999). Social Anthropological studies in Arabian cultures (e.g., Al-Torki, 1986), showed that there is no limit to the realm of individual behaviors where, for example,

older people such as parents must be obeyed at all times. The authority of old age extends to the selection of a major in college and to the selection and/or approval of a spouse. Although, we cannot draw from that a cause-and-effect relationship with mental health outcomes, it is certainly an interesting line of clinical investigation to study this type of age relationship cross culturally to determine its mental health implications. Based on the present results, however, preventive measures should be established within health systems in Arab cultures to confront mental and emotional health problems in these groups of young people.

That house makers were among the lowest psychopathological groups, is inconsistent with American and Western research that usually shows that married women and house makers are more vulnerable to stress and mental illness because of the limited opportunities available to them (Fabrega, Mezzich, Ulrich, & Benjamin, 1990; Gove, 1979a; 1979b; Gove & Tudor, 1973). Although we cannot speculate extensively about this difference, a word about the psychological implications of marriage for women in Arab conservative cultures may be in order.

In a male dominated society, which place many restrictions on male/female relationships, marriage can provide women with more chances for legitimate socialization. Married women as compared by non married females can enjoy more opportunities for making decisions relating to child support, sex, economic privileges, etc. This leaves the married in a more positive position and provides her with greater opportunities for being in control , a shield against psychopathology. Although Arab women who are married may be perceived as more restricted than working women groups, they can be proud of their dominant family role and, thus, experience less overall psychopathology.

The pattern of group differences demonstrated on the *hostility scale* indicated that police officers, secondary school students, and theology students were generally higher than other groups. This may indicate that psychopathological tendencies in these groups are colored by more inclination towards negative acting out in response to stress. Therefore, psychiatric and psychological services should consider providing different types of help based on group types

targeted for mental health services. Obviously, research in this area is needed to explore the interaction between social groups and psychopathological patterns in Arabian samples. This research represented just one of the attempts towards this goal.

One major interpretation of group differences in psychopathology, in the current study, can be singled out based on the interaction between social roles and life's stressful events. It is assumed that some groups are more vulnerable to psychopathology because their roles expose them to more stressful life events (Bryant & Harvey, 2000; Gove, 1979b). Groups more vulnerable to the effects of stressful life events would develop a significant proportion of distress and related mental health problems (Kessler, Price, & Wortman, 1985). If this theory is accepted, it may be then concluded from this research results that, relative to other social groups in that part of the culture, adolescents, young adults including high school and junior college students, and elementary school teachers are the most vulnerable to mental health pathology. It is unfortunate, however, to indicate that the mental health care delivery system in most Arabian cultures including Saudi Arabia provides limited opportunities for mental health care of these groups. Most mental health services are centralized in large general hospitals and provide limited help in terms of prevention, mental health education, and early intervention with major emotional and mental problems if warranted. Clearly more preparedness and funding for more specialized programs in hospitals, schools, colleges, and private clinics dealing with mental health services in that part of the world is badly needed.

References

Al- Torki, S. (1986). *Women in Saudi Arabia: Ideology and behavior among the elite*. New York, N.Y.: Columbia University Press.

Abdel- Mawgoud, M. & Moftah, A. (1995). Effects of psychotherapy on psychological and behavioral disturbances among drug addicts in Saudi Arabia .*Current Psychiatry*, 2, 31 -39.

Baron, N. & Matsuya, Y. (1988). Symptoms of depression and psychological distress in United States and Japanese college students. *The Journal of Social*

Psychology, 128, 803 -816.

Bryant, R. A., & Harvey, A. G. (2000). *Acute stress disorder.* American Psychological Association: Washington, D. C.

Eysenck, H. J., & Eysenck, S. B. J. (1975*) Manual of the Eysenck Personality Questionnaire.* San Diego: Educational & Industrial Testing Services.

Fabrega, H., Mezzich, J., Ulrich, P., & Benjamin, L. (1990) Females and males in an intake psychiatric setting. *Psychiatry: Interpersonal and Biological Processes,* 53, 1- 16.

Fleming, J. E., Offord, D. R., & Bogle, J. (1989). Epidemiology of childhood depressive disorders. Journal of American Academy of Childhood and Adolescent. *Psychiatry*, 29, 571- 580.

Forsell, Y., Jerom, A. F., & Strauss, E. V. (1995). Prevalence and correlates of depression in a Population of nonagenarians. *British Journal of Psychiatry*, 167, 61-64.

Gove, W. P. (1979a) Sex, marital status, and psychiatric treatment: A research note. *Social Forces*, 51.34-45.

Gove, W. P. (1979b) Sex differences in the epcdemiology of mental disorders: Evidence and explanation. In E. S. Gomberg & V. Franks (Eds.). *Gender and disordered Behavior: Sex differences in psychopathology*, (pp.73-95,) New York, N.Y.: Bruner/Mazel.

Gove, W. P., & Tudor, J. F. (1973) Adult sex roles and mental illness. *American Journal of Sociology*, 73, 812-835.

Hamburg, D. A., & Takanishi, P. (1989) preparing for life: the critical transitions of adolescence. *American Psychologist*, 44, 825-827.

Hamilton, M. (1989) Frequency of symptoms in melancholia (depressive illness) . *The British Journal of Psychiatry*, 154, 201-206.

Ibrahim, A-S. (1982) The factorial structure of the Eysenck Personality Questionnaire among Egyptian university students. *Journal of Psychology*, 112, 221-226.

Ibrahim, A-S. & Al-Nafie, A. (1991). Perception and concern about sociocultural change and psychopathology in Saudi Arabia. *The Journal of Social Psychology*, 13,179-186.

Ibrahim, A-S. & Ibrahim, R. M. (1999). Cultural considerations in mental health needs and practice: An Arab experience. *Advances in Medical Psychotherapy and Psychodiagnosis*, 10, 139-150.

Ibrahim, R. M. (1991). Sociodemographic aspects of depressive symptomatology: Cross cultural comparisons. *Dissertation Abstract International*, 51, 12.

Kessler, R. C., Price, R. H. & Wortman, C. B. (1985). Social factors in psychopathology: stress, social support, and coping processes. In M. Rosenweig, & L. W. Porter (Eds.), *Annual Review of Psychology*. Palo Alto, CA: Annual Reviews Inc.

Khalik, A. M. (1994) The developmental study of anxiety. *The Annals of the Faculty of Arts*, 14, No.90. (In Arabic).

Kupfer, D. J., & Frank, F. (1981). *Depression*. New York: Upjohn.

Millstein, S. G. (1989). Adolescent health: challenges for behavior scientists. *American Psychologist*, 44, 837-843.

Powell, J. W., Denton, R.1 & Mattison, A. (1995). Adolescent depression: Mother-adolescent dyad and locus of control. *American Journal of Orthopsychiatry*, 65, 263-273.

Rosenfield, D. (1980). Sex differences in depression: Do women always have higher rates. *Journal of Health and Social Behavior*, 21,33-42.

Schwab, J. J., Brown, S. N., & Holzer, C. F. (1968). Depression in medical inpatients: sex and age differences. *Mental Hygiene*, 627-630.

Schwab, J. J., & Holzer, C. F., Warhett, C. W., & Schwab, R. B. (1981). Human ecology and depressive symptomatology. In J. Masserman, & S. S. Schwab (Eds.). *Social psychiatry*, Vol.III, 180-197. New York: Grune Stratton.

Weissman, M. N., & Klerman, G. L. (1977). Sex differences and the epidemiology of depression. *Archives of General Psychiatry*, 34, 98-112.

Zuckerman, N., & Lubin, B. (1965). *Multiple Affect Adjective Checklist*. San Diego: Educational and Industrial Services.

TABLE 1

Means and standard deviations for males (N=989) and females (1024)

Variables	Males			Females		
	M	SD	SE	M	SD	SE
DSS	28.34	6.47	.21	29.98	6.54	.21
SI	37.93	9.02	.29	38.42	8.44	.29
MAACL (A)	6.47	3.28	.11	7.10	3.42	.11
MAACL (D)	11.95	5.37	.17	12.87	5.59	.17
MAACL (H)	7.71	3.39	.11	7.61	3.10	.09

Note. DSS= Depression Symptomatology Scale; SI= Symptom Inventory; MAACL= Multiple Affect Adjective Checklist; A= Anxiety; D= Depression; H= Hostility.

TABLE 2

Correlation Matrix for Males (N=989) and Females (N=1024)

Variables	DSS	SI	MAACL (A)	MAACL (D)	MAACL (H)
correlations *					
DSS	00	.74	.35	.32	.26
SI	.71	00	.36	.35	.30
MAACL(A)	.39	.37	00	.70	.59
MAACL(D)	.45	.35	.61	00	.64
MAACL(H)	.19	.20	.48	.64	00

Note. The correlation values for males are above the diagonal, and that for females are below the diagonal.

DSS = Depression Symptomatology Scale; SI = Symptom Inventory; MAACL = Multiple Affect Adjective Checklist; A = Anxiety; D = Depression; H = Hostility.

* All correlations, $p<.05$.

TABLE 3

F-Ratio results of Male Subgroups-Means, Standard Deviations and Significance Levels.

Sample	Scales					
			MAACL			
	DSS	SI	A	D	H	Total
Government employees (n= 105)						
M	26.83	34.51	5.75	10.49	7.16	16.95
SD	6.12	7.60	3.17	5.23	2.98	5.02
Secondary School students (n=230)						
M	28.40	39.76	6.65	12.89	8.38	19.22
SD	6.18	9.18	3.26	5.68	3.26	5.52
Secondary School teachers (n= 40)						
M	25.20	32.68	5.65	11.35	6.90	16.36
SD	3.82	4.23	2.37	4.06	2.83	3.46
Theology Students (n=19)						
M	28.05	37.26	6.05	13.05	8.05	18.5
SD	6.34	6.33	3.02	5.76	2.56	4.8
Physical education students (n= 39)						
M	28.35	39.74	6.08	10.13	8.26	18.51
SD	7.14	10.00	3.29	4.95	4.00	5.88
Police officers (n= 41)						
M	35.81	46.14	8.10	12.29	10.33	22.53
SD	10.95	15.59	4.23	7.65	3.93	8.47
Bank employees and accountants (n= 39)						
M	28.66	31.69	5.90	9.62	6.69	16.51
SD	4.84	5.41	3.80	5.07	3.76	4.58
F Ratio	10.35	12.29	2.50	2.32	5.34	
P	.000	.000	.02	.03	.000	

Note. DSS= Depression Symptomatology Scale; SI= Symptom Inventory; MAACL= Multiple Affect Adjective Checklist; A= Anxiety; D= Depression; H= Hostility.

TABLE 4

F-Ratio results of Female Subgroups-Means, Standard Deviations and Significance Levels

Sample	Scales					
			MAACL			
	DSS	SI	A	D	H	Total
Secondary School Students (n=289)						
M	31.85	42.89	7.58	13.86	8.03	20.84
SD	6.88	9.21	3.53	6.08	3.44	5.82
Secondary School teachers (n= 112)						
M	28.56	35.53+	6.89	13.43	8.00	18.48
SD	6.35	5.88	3.01	5.10	2.74	4.62
Liberal art students (n=112)						
M	31.67	39.88	7.42	13.00	7.72	19.93
SD	6.74	8.72	3.49	5.28	3.07	5.46
College students (n=57)						
M	29.91	36.84	6.91	11.63	6.79	18.42
SD	5.92	7.35	3.48	5.26	6.86	5.77
House makers (n=41)						
M	29.29	36.15	5.66	10.15	6.61	17.57
SD	6.05	6.74	3.32	5.45	2.53	4.82
Working women (n=44)						
M	26.17	36.03	5.18	10.52	6.25	16.83
SD	6.17	7.71	2.94	5.08	2.79	4.94
Preparatory school teachers (n=21)						
M	29.58	36.57	7.57	13.86	8.00	19.12
SD	5.88	6.25	2.93	3.20	2.53	4.12
F Ratio	25.18	22.10	4.23	4.20	3.22	
P	.0001	.0001	.004	.004	.004	

Note. DSS= Depression Symptomatology Scale; SI= Symptom Inventory; MAACL= Multiple Affect Adjective Checklist; A= Anxiety; D= Depression; H= Hostility.